

ESD Safety Committee Meeting Minutes

June 10, 2009

Attending: Don Depaolo, Terry Hazen, Greg Newman, H.H. Liu, Paul Cook, Vivi Fissekidou, Todd Wood

1. JHA Updates: Descriptions of Work for Work Groups need to be updated by June 30, 2009 and for Individuals by September 30, 2009. You should review the group work scope and update to include the following: Work Objectives; Work Locations; Materials Used; Processes Employed; Equipment Used; Expected Output

To review and update this Hazards Profile, go to the JHA website at <https://ehswprod.lbl.gov/ehstraining/jha/login.aspx> and

1. open the profile by clicking on "My Work Groups "XXX XXX"
2. click on the "Review/Edit Authorization" tab
3. update the work scope to address all required elements listed above, and
4. click the "Confirm Hazard Profile" button.

2. Mini HSS audit/draft report:

Strengths:

- ESD *sustained impact on safety behavior and performance* as it relates to planning, authorizing, and conducting work in ESD.
- Division personnel were clearly able to **describe the process** by which hazards are identified, appropriate controls are established, and authorization to proceed with work is granted. Similarly, personnel were **knowledgeable of the governing work authorization documents** (whether they be JHAs, AHDs, and/or RWAs) and the role of such in the planning, authorization, and execution of work activities.
 - The Work Lead in Building 70A/4403 effectively articulated how experiments are planned, the key laboratory hazards, the respective controls, and the application of OJT when students are used to support experimental activities.
 - The Work Lead in Building 70/114 provided an excellent discussion of the work authorization process and the roles of personnel in authorizing work.
- Division personnel were also able to **identify the "chain of command"** for work authorization and generally what personnel to seek if the "local" Work Lead were not present (see note above regarding Work Lead in Building 70/114).
- **On-the-job training (OJT)** and/or mentoring is a key mechanism used in Earth Sciences to assure that operation of key equipment or execution of key processes (1) is done safely, (2) provides the appropriate quality of research results, and (3) protects the integrity of the equipment. Positive examples are the processes used in Building 70A/4403 and in Building 70/114.
 - In Building 70A/4403, a formal process exists for documenting OJT prior to student's use of critical equipment.
 - In Building 70/158, the Principal Investigator has identified the four work processes to which he would like to apply formal OJT (e.g., weighing nano-materials) based on one or more of the considerations above.
 - In Building 70A/2275, equipment for which OJT is a requirement is tagged with the names of personnel who have the requisite OJT and are authorized to use such equipment.

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- **The Off Site Safety & Environmental Protection Plan (OSSEPP)** appears to be a best practice for the Laboratory in terms of a traceable and rigorous process for systematically evaluating hazards and applying controls for offsite (i.e., outside) projects.
 - The OSSEPP form appears to address the full array of risks one might encounter at an off-site location, requires identification of the mitigating control, and mandates the specification of required training. This is, in essence a comprehensive hazard analysis/work planning process.
 - Building 64 serves as a staging area in preparation for off-site work and is (appropriately) governed by a separate JHA. This is an excellent example of establishing clear boundaries between project preparation (in the Building 64 high bay) and project execution (as reflected in the OSSEPP documentation).
 - A series of check points governs when and how travel and project commitments can be made (e.g., travel arrangements and associated financial commitments cannot be made prior to the completion of the OSSEPP).
 - Copies of the OSSEPP documents are maintained in Building 64 for reference when equipment is readied for transport to the job location.
- **The condition of the vast majority of laboratories and work areas visited reflect a conscientious attitude toward safety.**
 - In this regard, the condition of Building 70A/4403, Building 70/114, and Building 70/158.
 - Notable was the understanding and approach used in Building 70/158 to the communication and control of co-located hazards.

Personnel were generally very engaged and enthusiastic about discussing their work and the safety controls and overall approaches used to assure protection of themselves and their co-workers (e.g., Work Lead in Building 70A/4403, Principal Investigator in Building 70/158, Work Lead in Building 70/114, Principal Investigator in Building 51F).

Weaknesses. Although the concept of **OJT** and/or mentoring was effectively described by most all personnel engaged, the notion that this activity is, in fact, **another level of work authorization** (i.e., in fact “the” final work authorization) **was not consistently recognized**. Notwithstanding the widespread use of OJT, clear and formalized expectations for the “competency expectations” and the need to have evidence of such are not consistently evident.¹

- **Personnel from the Division occasionally have assignments away from LBNL.** In some cases it is believed these personnel are Work Leads (and retain their Work Lead authorities and responsibilities while on travel). In such cases, it is not clear if a formal safety delegation either occurs or is required when a Work Lead is away. For example, the Work Lead in Building 70A/4403 was leaving the Laboratory for a period of time and – when asked about delegating authority – indicated that the students would be performing low risk activity and the lead researcher in Building 70/4403 and that a senior researcher in an adjoining lab would be providing oversight.
- There is not full positive assurance that the room containing the scanning machine in **Building 51F/102** cannot be inadvertently breached/opened – which would

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terminate the experimental activity. (Note: The exposure risk for personnel entering is zero since the door interlocks will shut off the CT scanner).

- The posting adjacent on the door to Building 70A/2275 regarding current categories of **gas cylinders did not appear to match the actual inventory of cylinders in the laboratory**; at least two were empty and could readily be removed.

Opportunities for Improvement.

- Provide additional structure/consistency around the mechanism for assuring the personnel demonstrate appropriate competency on equipment (or work processes) prior to receiving authorization to work without supervision. This might include:
 - Designating in each laboratory what equipment or processes are to be the subject of OJT requirements;
 - Establishing for such equipment or processes, -specific competency expectations against which personnel are evaluated; and
 - Requiring the production of formal “evidence”, which establishes that the competency has been demonstrated.
- Assure that an expectation is established which requires the delegation of safety responsibilities when the Principal Investigator/Work Lead is not present for extended periods. Consider implementing a general delegation protocol for personnel who are (1) Work Leads, (2) on long-term off-site assignments, and (3) concurrently responsible for on-going research activities at the Laboratory.
- Provide an enhanced administrative control on the north-facing door in Building 51F/102 – to increase the likelihood that the door cannot be inadvertently breached/opened and terminating an on-going experiment.
- **LBNL:** Although outside of the domain of ESD, the Laboratory should consider the need for a single framework for planning off-site work (i.e., work that is not governed by the host location’s safety and health program) and should assure that the OSSEPP process is recognized as a key job hazard analysis process.

3. Stop work- acid waste generation-ESD Response:

ESD labs are located in Bldgs. 64, 51F, 14, 70, and 70A. The ESD Lab Space Lead PIs have reviewed the stop work order and responded as follows:

1. For the laboratory work conducted in Bldgs. 64, 51F, and 14, the ESD Lab Space Lead PIs responded that their work does not generate strong acid waste.
2. For the laboratory work conducted in Bldg. 70 the ESD Lab Space Lead PIs responded that they use one of the following methods:
 - They use approved procedures to neutralize the acid waste (labs 70-143; 70-114; 70-279);
 - They segregate waste containers according the CHSP guidelines in secondary containment (labs 70-158; 70-131); or
 - They do not generate strong acid waste (labs 70-141; 70-166)
3. For the laboratory work conducted in Bldg. 70A the ESD Lab Space Lead PIs responded that they use one of the following methods:
 - They use approved procedures to neutralize the acid waste (labs 70A-4403);
 - They segregate waste containers according the CHSP guidelines in secondary containment (labs 70A-1109; 70A-4459; 70A-4461; 70A-4463);

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- They dispose all acid waste through the waste Fixed Treatment Unit (FTU) (labs 70A-4413; 70A-4419; 70A-4429; 70A-4429); or
- They do not generate strong acid waste (labs 70A-2245; 70A-2253; 70A-2275).

4. Planned Improvements to the SJHAWA form

The SJHAWA form will be modified to achieve the following goals:

- Increase the amount of online guidance (linked to the form) for documenting scopes of work, and assessing hazards and controls.
- Make the SJHAWA form easier to read, complete and send to all involved parties.
- Improve the process for updating and revising completed SJHAWAs
- Add the capability to store, search and retrieve SJHAWAs online.

In order to achieve these improvements, they are designing a system that will enable users to access and review SJHAWA forms from a central data repository using a web-based interface, the improvements will be developed, piloted and implemented in FY 2010. Currently several Divisions have expressed interest in forming an e-room repository for completed SJHAWAs where Divisions could upload their SJHAWAs and also download ones from other Divisions. Use of the E-room repository will be voluntary.